

New SP100VCA Variable-Flow Pumps

These low-cost peristaltic pumps are among the most compact, most powerful variable-flow pumps in the market. Flow rates are available from 0 to 62 ml/min. They adapt easily to almost any instrument application. Enjoy the benefits of peristaltic pumps in your fluid transfer application.

Select from two different motor speeds, three different tubing sizes and a variety of tubing materials. Tygon® A60G tubing offers the longest pump life, Silicone is the softest with higher flow rates. Viton® provides excellent chemical resistance. Modular power supplies and battery packs are available.

The pumpheads have ABS plastic housings, acetal rotor assembly with four stainless steel rollers. These brush Vdc motors are reversible. Silicone and Tygon® A60G pump systems are supplied with polypropylene fittings. Viton® systems are supplied with PVDF fittings. One year warranty.

Installation Note: These brush-type Vdc motors are rated for intermittent duty. Request information on our heavy-duty and brushless DC motors for continuous-duty applications.

**Variable-flow
Reversible
Remote Control**



SPECIAL FEATURES

*Fluid only contacts the tubing
Self-priming, run dry without damage
Variable-flow 12Vdc motors
Consistent metering capability
Compact size*

*Compact, variable-flow
SP100VCA pumps with
optional remote control.*

SPECIFICATIONS

| | Tygon®, Viton® | Silicone |
|-------------------------|--|--------------------------------|
| Max. Fluid Pressure: | 30 psig (2 bar) | 10 psig (0.7 bar) |
| Max. Suction Lift: | | |
| 0.8 and 1.6 mm ID | 16-ft (4.8 m) H ₂ O | 16-ft (4.8 m) H ₂ O |
| 3.0 and 5.0 mm ID | 25-ft (7.5 m) H ₂ O | 20-ft (6 m) H ₂ O |
| Flow Range: | See ordering table (page 2) | |
| Accuracy: | ±5% full scale | |
| Repeatability: | ±5% full scale | |
| Max. Fluid Temp.: | 93°C (200°F) | |
| Duty Cycle: | Intermittent | |
| Operating Temp.: | 0 to 50°C (32 to 122°F) | |
| Enclosure: | ABS plastic | |
| Wetted parts: | Various tubing materials. | |
| Power: | 12Vdc; 150 to 500 mA, 115V (24Vdc models available) | |
| Dimensions (W x H x D): | 84 x 140 x 97 mm; (3.3 x 5.5 x 3.8 in.) | |
| Shipping Wt: | 0.9 kg (2 lbs) | |

APPLICATIONS

*Chemical metering
Reagent dispensing
Waste chemical removal
Analytical instruments
Research & Development*

SP100VCA Max Flowrates (ml/min)

| Motor | Tubing ID (mm) | | | | |
|-------|----------------|--------|-----|-----|-----|
| RPM | Vdc | Amps | 3.0 | 1.6 | 0.8 |
| 330 | 12 | 400 mA | 62 | 17 | 5.6 |
| 70 | 12 | 200 mA | 13 | 3.6 | 1.2 |

Flow rates listed are nominal and will vary depending upon fluid viscosity and back pressure. Specifications listed are for Tygon A60G (formerly Norprene) tubing. Silicone flow rates are approx 10-20% higher. Viton flow rates slightly lower. Other RPMs and 24 Vdc systems are available. Inquire.

SP100VCA-Peri Pumps

| <u>Flow Rate</u> | <u>Tubing</u> | | | <u>Pump Part No.</u> | |
|---|----------------|-----------|-------------|----------------------|------------------|
| ml/min | ID | RPM Range | V-Flow,I/O | V-Flow,I/O/R | V-Flow,I/O/R,Rem |
| 12Vdc Pumps - Variable-flow; up to 500 mA current draw; Select Tubing Material below. | | | | | |
| 0 to 62 | 3.0 mm (1/8") | 0 to 330 | SP10XV1-513 | SP10XV1R-513 | SP10XV3R-513 |
| 0 to 17 | 1.6 mm (1/16") | | | | |
| 0 to 5.6 | 0.8 mm (1/32") | | | | |
| 0 to 13 | 3.0 mm (1/8") | 0 to 70 | SP10XV1-509 | SP10XV1R-509 | SP10XV3R-509 |
| 0 to 3.6 | 1.6 mm (1/16") | | | | |
| 0 to 1.2 | 0.8 mm (1/32") | | | | |

V-Flow=Variable-flow; I/O=On/Off Switch; I/O/R=On/Off/Reverse Switch; Rem=Remote Speed (0-5Vdc); Rem Start/Stop; Remote Direction.

Flow rates listed are nominal and will vary depending upon fluid viscosity and back pressure.

Other RPMs and 24 Vdc systems are available. Other motor rpms and special tubing options are available on special order. Call for details.

Tubing Set Material Selection

| Part No: | Description | Sizes Incl.(mm) | Fitting | Application Recommendations |
|--------------|-------------------|-----------------|---------|--|
| SP101-980AF | Tygon® A60G | 3, 1.6 ID | PP | Longest flex life, Black, Good with Acids/Bases |
| SP101F-980AF | Tygon® A60F | 3, 1.6, 0.8 ID | PP | Longest flex life, Beige, Food-Grade |
| SP104L-980AF | Tygon® LFL | 3, 1.6 ID | PP | Long flex life, Clear, USP, FDA |
| SP100-980AF | Silicone | 3, 1.6, 0.8 ID | PP | Good flex life, Translucent, General Purpose |
| SP100P-980AF | Tygon® 3350 (Sil) | 3, 1.6 ID | PP | Good flex life, Translucent, USP, ultra smooth |
| SP104P-980AF | Tygon® F-4040 | 3, 1.6 ID | PP | Good flex life, Yellow Transl, Fuel/Lubricant |
| SP104X-980AF | Tygon® XL-60 | 3, 1.6 ID | PP | Good flex life Clear, General Purpose |
| SP101R-980AF | Tygon® Chemical | 3, 1.6 ID | PP | Long flex life, Beige, Chem Resistant liner |
| SP102-980AF | Viton® | 3, 1.6, 0.8 ID | PVDF | Good flex life, Black, FDA, Chem Resist-Organics |

VAC power supply

Convert these compact drives to VAC models with a compact power supply. 5.5 OD x 2.5mm ID (center +) connector.

Order the optional power supply.

PS100.010 Power supply, 115Vac/12Vdc, 1A; US Std plug.

PS100.015E Power supply, 230Vac/12Vdc, 1A; Europ. plug.

Specifications subject to change.

APT Instruments provides no warranty on usage of pumps or life of tube. Immersion and life tests are recommended prior to use.

SmallPumps—TM Advanced Product Technology, LLC Viton—Reg TM DuPont Dow Elastomers LLC Tygon—Reg TM Saint Gobain Performance Plastics Co.

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